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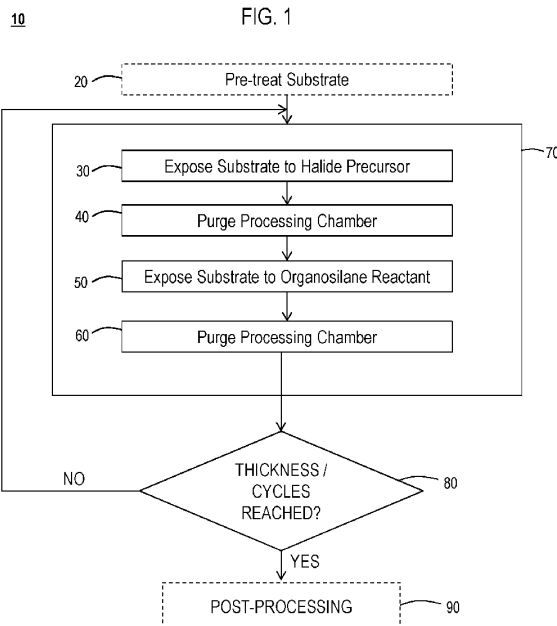
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(54) Title: METHODS FOR FORMING IMPURITY FREE METAL ALLOY FILMS



(57) Abstract: Methods of depositing a metal film by exposing a substrate surface to a halide precursor and an organosilane reactant are described. The halide precursor comprises a compound of general formula (I): MQ_zR_m , wherein M is a metal, Q is a halogen selected from Cl, Br, F or I, z is from 1 to 6, R is selected from alkyl, CO, and cyclopentadienyl, and m is from 0 to 6. The aluminum reactant comprises a compound of general formula (II) or general formula (III): wherein $R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^a, R^b, R^c, R^d, R^e$, and R^f are independently selected from hydrogen (H), substituted alkyl or unsubstituted alkyl; and X, Y, X', and Y' are independently selected from nitrogen (N) and carbon (C).

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